

REMARKS

Applicant respectfully requests reconsideration of the present U.S. patent application. Claims 1-5, 7-17 and 19-21 stand rejected under 35 U.S.C. § 103. Claims 1, 5, 15 and 20 have been amended. No claims have been canceled or added. Therefore, claims 1-5, 7-17 and 19-21 remain pending.

Claim Rejections - 35 U.S.C. §112

Claims 1 and 3 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Claim 1 has been amended to clarify the scope of the claim with regard to the level control signal. Applicant submits that the amendment to claim 1 overcomes the rejection under 35 U.S.C. § 112. Applicant therefore respectfully requests that the Examiner withdraw the rejections of claims 1 and 3 under 35 U.S.C. § 112, second paragraph.

Claim Rejections - 35 U.S.C. §103

Rejections of Claims 1 and 11-16 based on *Taniguchi*, *Holt* and *Apel*

Claims 1 and 11-16 were rejected under 35 U.S.C. §103 as being obvious over U.S. Patent No. 5,162,756 issued to Taniguchi et al. (*Taniguchi*), in view of Electronic Circuits – Digital and Analog by Holt (*Holt*) and U.S. Patent No. 6,894,561 issued to Apel (*Apel*). For at least the reasons set forth below, Applicant submits that claims 1 and 11-16 are not rendered obvious by *Taniguchi* in view of *Holt* and *Apel*.

Claim 1 recites the following:

a bias control circuitry to enable the first and second amplifiers in response to the level control signal, wherein the bias control circuitry enables the first amplifier to

operate in a saturated mode when the level control signal indicates a low power mode, wherein the second amplifier is disabled in the low power mode, and enables the second amplifier to operate in the saturated mode when the level control signal indicates a high power mode, wherein both the first and second amplifiers are enabled in the high power mode.

Claim 15 recites similar limitations.

Taniguchi discloses a high-frequency signal power divider/combiner. See Fig. 2; col. 3, lines 7-16 and 55-56. Applicant agrees with Examiner that *Taniguchi* does not disclose the level control circuit and bias control circuitry of claims 1 and 15. See Office Action, pages 2-3. However, Applicant does not necessarily agree with Examiner's other interpretations of *Taniguchi* and expressly reserves the right to refute such interpretations in any future office actions if necessary.

According to the Examiner, *Holt* teaches a bias circuit and level control circuit, and it would have been obvious to provide *Taniguchi* with such circuits. See Office Action page 4. However, although a bias control circuit may be a necessary part of an amplifier circuit, *Holt* teaches no more than basic principles and theories of electronic circuits. *Holt* does not disclose the bias control circuitry or level control circuit of claims 1 and 15. Therefore, *Holt* fails to cure the deficiencies of *Taniguchi*.

According to the Examiner, "*Holt* teaches that it is well known to provide a bias circuit ... so that [an] amplifier can operate ... so that non-linear operation is obtained." See Office Action, page 4. Furthermore, Examiner contends that it would have been obvious "to provide *Taniguchi* with a bias control circuit ... such that non-linear operation is obtained" See Office Action, page 4. In addition, Examiner contends that it would have been obvious "to provide the combination of *Taniguchi* and *Holt* with a bias control circuitry such as that of *Apel*" See Office Action, page 5.

Again, *Holt* teaches no more than basic principles and theories of electronic circuits, and does not disclose the bias control circuitry or level control circuit of claims 1 and 15. Applicant does not necessarily agree with Examiner's interpretations of *Holt* or *Apel* and expressly reserves the right to refute such interpretations in any future office actions if necessary. However, it is clear that *Taniguchi*, *Holt* and *Apel* would not be combined to provide "a bias control circuitry to enable the first and second amplifiers in response to the level control signal, wherein the bias control circuitry enables the first amplifier to operate in a saturated mode when the level control signal indicates a low power mode, wherein the second amplifier is disabled in the low power mode, and enables the second amplifier to operate in the saturated mode when the level control signal indicates a high power mode, wherein both the first and second amplifiers are enabled in the high power mode, as recited in claims 1 and 15.

In particular, *Apel* explicitly states that the advantage of the approach disclosed in *Apel* is in linearity, and that in all power states, high or low, RF transistors are biased for linear performance. See col. 3, lines 13-16. Therefore, *Apel* fails to cure the deficiencies of *Taniguchi* and *Holt*. In addition, *Apel* is disqualified as prior art because the present patent application and *Apel* were, at the time of invention of the present application was made, wholly owned by the same business entity, i.e., TriQuint Semiconductor, Inc. See 35 U.S.C. § 103(c) and MPEP § 706.02(1)(2).

In any event, *Taniguchi* in view of *Holt* and *Apel* fails to disclose at least one limitation of claims 1 and 15. Consequently, claims 1 and 15 are not rendered obvious by *Taniguchi* in view of *Holt* and *Apel* for at least the reasons set forth above. Applicant therefore respectfully requests that the Examiner withdraw the rejections of claims 1 and 15 under 35 U.S.C. § 103.

Claims 11-14 depend from claim 1. Claim 16 depends from claim 15. Because dependent claims include the limitations of the claims from which they depend, Applicant submits that claims 11-14 and 16 are not rendered obvious by *Taniguchi* in view of *Holt* and *Apel* for at least the reasons set forth above.

Rejections of Claims 2-4, 17 and 20 based on *Taniguchi*, *Holt*, *Apel* and *Cheng*

Claims 2-4, 17 and 20 were rejected under 35 U.S.C. § 103 as being unpatentable over *Taniguchi* in view of *Holt* and *Apel*, and further in view of *Cheng et al.*, U.S. Patent Application No. 2002/0190790 (*Cheng*). For at least the reasons set forth below, Applicant submits that claims 2-4, 17 and 20 are not rendered obvious by *Taniguchi* in view of *Holt*, *Apel* and *Cheng*.

Cheng was cited as teaching selectively supplying bias voltages to each of parallel-connected amplifiers. See Office Action pages 6-7. As explained above, *Taniguchi* in view of *Holt* and *Apel* fails to disclose a bias control circuitry to enable first and second amplifiers in response to a level control signal, wherein the bias control circuitry enables the first amplifier to operate in a saturated mode when the level control signal indicates a low power mode, wherein the second amplifier is disabled in the low power mode, and enables the second amplifier to operate in the saturated mode when the level control signal indicates a high power mode, wherein both the first and second amplifiers are enabled in the high power mode, as recited in claims 1 and 15. Examiner does not assert that *Cheng* discloses this limitation of claims 1 and 15.

Applicant does not necessarily agree with Examiner's interpretation of *Cheng* and expressly reserves the right to refute such interpretations in any future office actions if necessary. However, regardless of whether Examiner's interpretations of *Cheng* are

correct, *Cheng* fails to cure the deficiencies of *Taniguchi* in view of *Holt* and *Apel* explained above. Thus, *Taniguchi* in view of *Holt*, *Apel* and *Cheng* fails to disclose at least one limitation of claims 1 and 15. Consequently, claims 1 and 15 are not rendered obvious by *Taniguchi* in view of *Holt* and *Cheng* for at least the reasons set forth above.

Claims 2-4 depend from claim 1. Claims 17 and 20 depend from claim 15.

Because dependent claims include the limitations of the claims from which they depend, Applicant submits that claims 2-4, 17 and 20 are not rendered obvious by *Taniguchi* in view of *Holt*, *Apel* and *Cheng* for at least the reasons set forth above with regard to claims 1 and 15. Applicant therefore respectfully requests that the Examiner withdraw the rejections of claims 2-4, 17 and 20 under 35 U.S.C. § 103.

Rejection of Claim 21 based on *Taniguchi*, *Holt*, *Cheng*, *Apel* and *Atwater*

Claim 21 was rejected under 35 U.S.C. § 103 as being unpatentable over *Taniguchi* in view of *Holt*, *Apel* and *Cheng*, and further in view of U.S. Patent No. 4,189,732 issued to *Atwater* (*Atwater*). For at least the reasons set forth below, Applicant submits that claim 21 is not rendered obvious by *Taniguchi* in view of *Holt*, *Apel*, *Cheng* and *Atwater*.

Atwater was cited as teaching a circuit for providing a power supply voltage to an amplifier. See Office Action page 7. As explained above, *Taniguchi* in view of *Holt*, *Apel* and *Cheng* fails to disclose applying a first output level control signal to a collector of the first amplifier to cause the first amplifier to operate in saturated mode when the first amplifier is enabled, such that the first amplifier provides a first output signal in response to the input signal, as recited in claim 15. Examiner does not assert that *Atwater* discloses this limitation of claim 15.

Applicant does not necessarily agree with Examiner's interpretation of *Atwater* and expressly reserves the right to refute such interpretations in any future office actions if necessary. However, regardless of whether Examiner's interpretations of *Atwater* are correct, *Atwater* fails to cure the deficiencies of *Taniguchi* in view of *Holt*, *Apel* and *Cheng* explained above. Thus, *Taniguchi* in view of *Holt*, *Apel*, *Cheng* and *Atwater* fails to disclose at least one limitation of claim 15. Consequently, claim 15 is not rendered obvious by *Taniguchi* in view of *Holt*, *Apel*, *Cheng* and *Atwater* for at least the reasons set forth above.

Claim 21 depends from claim 15. Because dependent claims include the limitations of the claims from which they depend, Applicant submits that claim 21 is not rendered obvious by *Taniguchi* in view of *Holt*, *Apel*, *Cheng* and *Atwater* for at least the reasons set forth above with regard to claim 15. Applicant therefore respectfully requests that the Examiner withdraw the rejections of claim 21 under 35 U.S.C. § 103.

Rejections of Claims 5, 7-10 and 19 based on *Taniguchi*, *Holt*, *Apel* and *Atwater*

Claims 5, 7-10 and 19 were rejected under 35 U.S.C. § 103 as being unpatentable over *Taniguchi* in view of *Holt* and *Apel*, and further in view of *Atwater*. For at least the reasons set forth below, Applicant submits that claims 5, 7-10 and 19 are not rendered obvious by *Taniguchi* in view of *Holt*, *Apel* and *Atwater*.

Atwater was cited with regard to a power supply circuit. See Office Action, page 8. As explained above, *Taniguchi* in view of *Holt* and *Apel* fails to disclose a bias control circuitry to enable first and second amplifiers in response to a level control signal, wherein the bias control circuitry enables the first amplifier to operate in a saturated mode when the level control signal indicates a low power mode, wherein the second

amplifier is disabled in the low power mode, and enables the second amplifier to operate in the saturated mode when the level control signal indicates a high power mode, wherein both the first and second amplifiers are enabled in the high power mode, as recited in claims 1 and 15. Examiner does not assert that *Atwater* discloses this limitation of claims 1 and 15.

Again, Applicant does not necessarily agree with Examiner's interpretation of *Atwater* and expressly reserves the right to refute such interpretations in any future office actions if necessary. However, regardless of whether Examiner's interpretations of *Atwater* are correct, *Atwater* fails to cure the deficiencies of *Taniguchi* in view of *Holt* and *Apel* explained above. Thus, *Taniguchi* in view of *Holt*, *Apel* and *Atwater* fails to disclose at least one limitation of claims 1 and 15. Consequently, claims 1 and 15 are not rendered obvious by *Taniguchi* in view of *Holt*, *Apel* and *Atwater* for at least the reasons set forth above.

Claims 5 and 7-10 depend from claim 1. Claim 19 depends from claim 15. Because dependent claims include the limitations of the claims from which they depend, Applicant submits that claims 5, 7-10 and 19 are not rendered obvious by *Taniguchi* in view of *Holt*, *Apel* and *Atwater* for at least the reasons set forth above with regard to claims 1 and 15. Applicant therefore respectfully requests that the Examiner withdraw the rejections of claims 5, 7-10 and 19 under 35 U.S.C. § 103.


CONCLUSION

For at least the foregoing reasons, Applicant submits that the rejections have been overcome. Therefore, claims 1-5, 7-17 and 19-21 are in condition for allowance and such action is respectfully solicited. The Examiner is respectfully requested to contact the

undersigned by telephone if such contact would further the examination of the application.

Respectfully submitted,

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